

### **Amendments to the Specification**

**Please replace the paragraph beginning at page 1, line 6, with the following rewritten paragraph:**

The present invention relates to a field interpolation method determination device for determining whether to perform either an inter-field interpolation method or an intra-field interpolation method ~~to combine on~~ fields of an inputted interlaced signal ~~into frames and thereby~~ to provide conversion to a progressive signal.

**Please replace the paragraph beginning at page 3, line 4, with the following rewritten paragraph:**

Japanese Laid-Open Patent Publication No. 9-18784 (claiming a priority of US application No. 94-366799) discloses a field interpolation method determination device ~~a field interpolation method determination device~~ which identifies whether an input interlaced signal is a telecine-converted signal based on an inter-field difference of the input interlaced signal, and determines a field interpolation method.

**Please replace the paragraph beginning at page 5, line 3, with the following rewritten paragraph:**

The inter-field interpolation ~~signal-video-video signal~~ Sw1 is either of a 2-field delay input interlaced signal Vd2 and an input interlaced signal Vin, which respectively correspond to fields before and after the 1-field delay input interlaced signal Vd1, and it is selected as follows.

**Please replace the paragraph at page 13, line 2 through page 14, line 7, with the following rewritten paragraph:**

A first aspect of the present invention is directed to a field interpolation method determination device for determining whether to perform either an inter-field interpolation

method or an intra-field interpolation method ~~to combine on~~ fields of an inputted interlaced signal ~~into frames and thereby~~ to provide conversion to a progressive signal, the device comprising:

pixel level difference detection means for detecting a pixel level difference between an input interlaced signal and a 1-field delay input interlaced signal obtained by delaying the input interlaced signal by one field;

field correlation detection means for detecting correlation between the input interlaced signal and the 1-field delay input interlaced signal based on the pixel level difference, and outputting ~~N-1~~ inter-field correlation determination signals;

inter-field ~~difference correlation~~ storage means for storing ~~the N-1 inter-field correlation determination signals~~ corresponding to N sequential fields of the input interlaced signal;

field/frame correlation determination means for determining, based on a pattern of values of the N-1 inter-field ~~difference correlation~~ determination signals, whether ~~two sequential fields among the N sequential fields are generated from a same frame or different frames~~ either 2-2 or 2-3 pulldown-converted; and

interpolation method determination means for determining, as an interpolation method, inter-field interpolation if the fields are determined to have been ~~generated from the same frame~~ either 2-2 or 2-3 pulldown-converted, or intra-field interpolation if the fields are determined to have been ~~generated from the different frames~~ neither 2-2 nor 2-3 pulldown-converted.

**Please replace the paragraphs at page 15, line 12 through page 17, line 3, with the following rewritten paragraphs:**

In a fifth aspect based on the second aspect, counter means increments by one count if the fields are determined to have been ~~generated from the same frame~~ either 2-2 or 2-3 pulldown-converted, resets a count value if they are determined to have been ~~generated from the different frames~~ neither 2-2 nor 2-3 pulldown-converted, or maintains the count value if otherwise, and

the interpolation method determination means selects the inter-field interpolation if the count value is greater than a predetermined value, or selects the intra-field interpolation if the count value is less than or equal to the predetermined value.

In a sixth aspect based on the first aspect, if the input interlaced signal is a ~~2-3 pulldown signal~~ pulldown-converted, N is equal to or more than 6.

In a seventh aspect based on the first aspect, if the input interlaced signal is a ~~2-2 pulldown signal~~ pulldown-converted, N is equal to or more than 5.

In an eighth aspect based on the first aspect, if at least two sequential signals among the N-1 inter-field correlation determination signals indicate absence of correlation, the field/frame correlation determination means determines that ~~the two sequential fields have been generated from the different frames~~ the input interlaced signal have been neither 2-2 nor 2-3 pulldown-converted.

In a ninth aspect based on the first aspect, if the N-1 inter-field correlation determination signals alternately indicate presence and absence of correlation, the field/frame correlation determination means determines that ~~the two sequential fields have been generated from the same frame~~ the input interlaced signal have been either 2-2 or 2-3 pulldown-converted.

In a tenth aspect based on the first aspect, the field correlation detection means includes:  
pixel difference determination means for determining for each pixel whether the pixel signal level difference is greater than a first threshold which indicates a predetermined pixel level and outputting a pixel unit level difference determination result represented by a binary value;

field unit level difference determination means for adding one field to the pixel unit level difference determination result, and outputting a field unit level difference determination result; and

inter-field correlation determination means for determining whether inter-field correlation is significant based on whether the field unit level difference determination result is greater than a second threshold indicating a predetermined number of pixels.

**Please replace the paragraph beginning at page 17, line 24, with the following rewritten paragraph:**

In a thirteenth aspect based on the first aspect, the inter-field difference determination means further includes: field identification means for outputting, based on the 1-field delay input interlaced signal, a field identification signal which indicates whether a field of the 1-field delay input interlaced signal is an even field or an odd field; and

an AND circuit for calculating a logical product of the field identification ~~means~~ signal and the inter-field correlation determination signal, and outputting the product to the ~~N~~ inter-field difference storage means.

**Please replace the paragraph beginning at page 25, line 4, with the following rewritten paragraph:**

The field interpolation method determination section 8a ~~determines~~ determines relationships between fields and parent frames in the input interlaced signal based on an inter-field pixel level difference  $S_p$ , and determines whether to use either inter-field interpolation or intra-field interpolation to convert a 1-field delay input interlaced signal  $V_{d1}$  into a progressive signal.

**Please replace the paragraph beginning at page 27, line 22, with the following rewritten paragraph:**

The first register 85, the ~~second~~ third register 86, the second register 87, and the fourth register 88 are D-flip-flops, and supplied with the field pulse VP as a clock. These four registers sequentially store a corresponding one of four sequential inter-field correlation determination signals  $D_f$ . Also, values of the stored four inter-field correlation determination signals are outputted as register output signals (R1-R4).

**Please replace the paragraph beginning at page 30, line 4, with the following rewritten paragraph:**

Next, referring to FIG. 4, an operation of the video signal processing device 100a is described. The input interlaced signal  $V_{in}$  is obtained by converting parent frames A, B, and C of a progressive signal into A1 and A2, B1 and B2, and C1 and C2, respectively. Fields of the input interlaced signal  $V_{in}$  are entered in "field No." in the order from smallest to largest.

**Please replace the paragraph beginning at page 34, line 14, with the following rewritten paragraph:**

The field interpolation method determination section 8b determines ~~determines~~ relationships between fields and parent frames in an input interlaced signal, based on a 1-field delay input interlaced signal  $V_{d1}$  and an inter-field pixel level difference  $S_p$ , and determines whether to use either inter-field interpolation or intra-field interpolation to convert the 1-field delay input interlaced signal  $V_{d1}$  into a progressive signal.

**Please replace the paragraph beginning at page 39, line 13, with the following rewritten paragraph:**

The field interpolation method determination section 8c determines ~~determines~~ relationships between fields and parent frames in an input interlaced signal based on a field identification signal  $D_{oe}$  and an inter-field pixel level difference  $S_p$ , and determines whether to using either inter-field interpolation or intra-field interpolation to convert a 1-field delay input interlaced signal  $V_{d1}$  into a progressive signal.

**Please replace the paragraph beginning at page 40, line 20, with the following rewritten paragraph:**

The ODD/EVEN detection section outputs "0" as the field identification signal  $D_{oe}$  if the 1-field delay input interlaced signal  $V_{d1}$  corresponds to an odd field, while it outputs "0" "1" as

the field identification signal Doe if the 1-field delay input interlaced signal Vd1 corresponds to an even field.